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## THE WORK OF THE PENNSYLVANIA MUSEUM AND SCHOOL OF INDUSTRIAL ART

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Established in 1876 as an expression of an earnest purpose to give effect to the unmistakable lessons of the great exhibition, the Pennsylvania Museum and School of Industrial Art of Philadelphia was among the first institutions in America to proclaim a distinctly industrial aim as the leading motive in all the activities of a museum and school of art. The museum is located at Memorial Hall, in Fairmount Park, and the school is at the northwest corner of Broad and Pine streets, in the city. The collections of the one and the methods of instruction which characterize the other, are ordered entirely with reference to illustrating industrial history and to serving industrial needs. The museum is especially rich in objects of American manufacture and in such things as textiles in which the inspiration and instruction to be derived from them are most directly available for the purposes of the modern workman, while the work of the school has been developed along such practical lines that it is virtually a trade school for most of the more artistic forms of craftsmanship.

During the first few years of its history it was devoted to drawing, painting, modeling and designing, with constant regard, of course, to industrial needs, but without attempting to provide instruction in actual craftsmanship of any kind. The necessity of providing such instruction became apparent, however, very early. Even from the point of view of the designer this was felt to be imperative, as the school has always based its teaching of industrial design on the principle that the character of which all good design is the expression, is workmanlike character, inherent in the processes of production as distinguished from anything that can be imposed upon the workman from the outside. It was in obedience to this call, therefore, that the beginning in the teaching of craftsmanship was made. But this purpose was soon expanded to such an extent that the teaching of any trade that was at all artistic was regarded as

sufficiently worthy and desirable in itself to need no explanation or excuse of this kind; indeed, it may almost be said that the principle stated above has been carried so far that instead of teaching trades for the sake of vitalizing the teaching of design, it now attaches very little importance to any teaching of design that is not directly associated with actual production of some kind. The School of Textile Design and Manufacture, which is the most important of these practical departments, was organized in 1884, and is widely known as the first school of this kind to be established in America. It owes its existence to the efforts of many of the most energetic and influential members of the Philadelphia Textile Association, which was formed in 1882, and which had for one of its most clearly defined objects the promotion of industrial education of a kind that should correspond to the needs of the textile industry already felt to be acute. No school of the kind existed in this country and there were, consequently, neither precedents for organization nor trained instructors available. The manufacturers knew only that they were being beaten in their own home markets, protective tariff and all, and they realized that nothing would save them but the cultivation here at home of the kind of skill on which the success of their European rivals depended. This meant that the spirit in which the work was undertaken was intensely practical, and that whatever the school was to accomplish was to be along the line of turning out men who could actually do good work. That its efforts in this direction have been highly successful the long list of men in important positions which is published in the school circular every year furnishes the most convincing evidence.

The initiative in the whole movement—and this means the inauguration of practical industrial education in America—was taken by Mr. Theodore C. Search, who was president of the Textile Association at that time, as well as vice-president and chairman of the committee on instruction of the Pennsylvania Museum and School of Industrial Art, of which institution he has been president since 1898. Mr. Search assumed at first the entire financial responsibility for organizing and equipping the textile school as a department of the School of Industrial Art. To his devoted and untiring service in its behalf from the first inception to its present high state of development, more than to all other agencies combined, its success is due.

In this textile work the distinction between technical education and trade instruction, which it is often important to observe, is lost or ignored almost entirely. In textile production all the processes that formerly demanded a considerable degree of hand skill are now performed by machinery, and all educational effort in developing higher efficiency, whatever the grade, must be directed to the cultivation of industrial intelligence rather than manual dexterity. As already noted, however, the school bases all theoretical instruction on practical experience, and believes that the things that are really essential in the mastery of any craft are best learned through, or at least in connection with, a good deal of practice in the craft itself, carried on as nearly as possible in the ways that obtain in actual industrial establishments. To this end the mechanical laboratories of the school are equipped, not with working models, as is often the case in Europe, but with full size machines and appliances, by means of which work of commercial size may be produced and the real problems of mill administration and direction faced at first hand.

What has been done in this way for the textile trade the school aims to do, as far as possible, for such other industries as pottery, stained glass, architectural modeling, architectural drawing, ornamental wrought iron work, interior decoration, woodwork and carving, bookbinding, ornamental leather, and indeed almost all forms of craftsmanship in which the artistic aim is at all prominent. With trade instruction proper, considered apart from its relation to the industrial arts, the institution has, of course, not much to do, as its objects are first and always the promotion of artistic things. Its experience ought, however, to count for something in the solution of the main problems with which the whole proposition of instruction in trades is confronted. I think it has done enough to show that instruction cannot be at once thorough in the cultivation of its own particular field, and devote, at the same time, a large part of its energy to something else.

There are those who seem to feel that the work of the trade school should be, at most, a sort of adjunct, or annex, to the general scheme of culture diffusion and citizenship promotion which has furnished thus far the controlling influence in shaping our whole educational policy, whether public or private. There are those also whose interest in the subject is inseparable from the conviction that

nobody can be taught anything worth knowing, in the trades or anywhere else, who has not first been taught a lot of other things that have long constituted the stock in trade of the scholar as such and which refuse, therefore, to be separated, in this class of mind, from any form of effort that is associated with the school. To the extent that either of these convictions controls the movement, industrial education becomes a tail to the high school kite and nothing else, and it is just because this same kite is already out of sight in the clouds of the impracticable that the demand for something better is so insistent.

The School of Industrial Art does not undertake to teach any branches of general education, either English, or classical, or scientific, except those which find their immediate application in the school itself. It provides in the textile school an excellent course in chemistry, because a knowledge of this branch is indispensable to the man who would master that industry, and because the subject can be taught in direct association with such practical applications as dyeing, bleaching, etc., and in the art school, history is studied from the point of view of the designer, who is continually called upon to work in the styles of great historical periods and for whom it is highly desirable that these periods should be something more than names.

With these exceptions, the courses are strictly confined to artistic and technical subjects. Pupils must be at least sixteen and must pass an entrance examination exacting enough to show that their minds are as mature as they can reasonably be expected to be at that age, and that they have some aptitude for the work of the school and some seriousness of purpose in taking it up. Of formal lists of questions to be answered there is nothing at all.

The organization comprises two departments, the School of Applied Art and the Philadelphia Textile School, each of which offers several courses. In the School of Applied Art these courses, which usually require four years for their completion, are as follows:

1. A regular course in industrial drawing, painting and modeling.
2. A normal art course, covering most of the ground of the regular course, but including also work in all those forms of craftsmanship which are available for use in common schools, and which

have come to be very generally regarded as belonging to the province of the teacher of drawing.

3. A course in interior decoration.
4. A course in applied design.
5. A course in illustration.

Special students are freely admitted to any of these courses as well as to the classes in craftsmanship already enumerated. As a matter of fact, the number of those who graduate from any of them is comparatively small. The vast majority of students have some special aim, or develop some ability, that leads to profitable employment, the call of which is far stronger than the desire to possess the school's diploma.

In the textile school the case is somewhat different, and with the students of this department graduation, relatively, counts for considerably more. It offers the following courses, each of which requires three years: (1) A regular course, covering all branches of textile manufacture in cotton, wool, worsted and silk. (2) A course in chemistry and dyeing, covering not only the work of the practical dyer, but the manufacture of modern dyestuffs and in general whatever is required to fit the student to fill the position of chemist in textile establishments. It also offers the following two-year courses:

3. A course in cotton manufacture.
4. A course in wool and worsted manufacture.
5. A course in silk manufacture.
6. A course devoted to yarn manufacture, covering all matters pertaining to stock selection, spinning, dyeing, etc., but not including weaving.
7. A course in Jacquard design.

Each of these subjects is approached and treated from the practical side, and through the generous co-operation of local manufacturers the machinery with which the school is equipped is in almost constant operation instead of being, as is often the case, a model for the demonstration of a principle which the student learns in theory, perhaps, but not in practice.

Like nearly all the schools with a similar purpose whose history I have investigated, either in Europe or America, the Pennsylvania Museum and School of Industrial Art was established by private initiative and received no public support of any kind until it had

amply demonstrated its usefulness. The museum in Memorial Hall was opened in May, 1877, and the school was opened during the following December in temporary quarters at Broad and Vine streets, in the building since known as Industrial Hall. It was removed in 1879 to the rooms of the Franklin Institute, 15 South Seventh street, and again in 1880 to 1709 Chestnut street. In 1887 it was removed to 1336 Spring Garden and in 1893 to its present location at Broad and Pine streets.

During the first ten years of its existence the school was supported entirely by the dues of subscribing members, the gifts of public-spirited individuals and the funds raised in various ways by the trustees and an untiring associate committee of women, supplemented by a very small endowment and the always insignificant amount derived from tuition fees. In 1887 the state legislature made an appropriation of \$5,000 a year, which amount has been gradually increased with the growth of the school until it now amounts to \$50,000. Since 1881 the City of Philadelphia has also granted, through the park commission, some support for the museum in Memorial Hall, and since 1896 it has made direct appropriations to the school—amounting at present to \$25,000 a year—and has provided through the board of education for a system of free scholarships for pupils of the public schools.

The school is for both sexes. It maintains both day and evening classes. It has a staff of thirty-nine instructors, and its enrollment amounts to a little over 1,000. The work in which it was so early a leader is still in the first stages of its development, but it has already accomplished enough to demonstrate the utility of an education that concerns itself entirely with practical aims. It can point to nearly 1,500 former pupils who have achieved positions in the industrial world, more or less distinguished, but always honorable because helpful. The school certainly has produced upon the life of this, the typical industrial city of America, an impression as beneficent as it is profound.